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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/657,707	09/09/2003	Ioan Dorin Ilea	31727-2019	8746

33721 7590 09/29/2004

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EXAMINER

BOSWELL, CHRISTOPHER J

ART UNIT	PAPER NUMBER
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3676

DATE MAILED: 09/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/657,707

Applicant(s)

ILEA ET AL.

Examiner

Christopher Boswell

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 7/26/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Objections

Claims 1, 11 and 14 are objected to because of the following informalities: Claim 1, line 13; claim 11, lines 1-2 and claim 14, line 13 refer to “a said latch” wherein there is no recitation of a latch within the aforementioned claim. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-2 and 5-13 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent Number 6,698,805 to Erices et al.

Erices discloses a latch release device having a housing (1, 11, 13, and 22), an electric motor (7) mounted in the housing, a worm (8) operatively coupled to the motor for driving rotation of the worm about an axis in a first rotational direction, a worm gear (gear on 12) in meshing engagement with the worm, and being mounted in the housing for rotation about an axis substantially orthogonal to the worm axis, a camshaft (12) mounted on the worm gear and having a rotation axis coincident with the gear axis, the camshaft having a distal end extending to the exterior of the housing, a cam (9) affixed at the exterior end of the camshaft, having a surface

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(figures 2 and 3) for engaging a latch (3 and 4) to move the latch from a closed position to a release position as the gear rotates in a first direction from a first position to a second position under control of the motor, as in claim 1, and where the work gear is biased against the rotation from the first position to the second position (column 3, lines 10-16), as in claim 2.

Erices also discloses the housing having an injection-molded plastic tubular mount (12') extending into the housing interior, with the gear being rotatably mounted thereon, as in claim 5, wherein the housing has a first stop and a second stop unitarily molded therewith, and the gear includes a first stop and a second stop (column 8, lines 30-37), wherein when the gear is in the first position, the first stops are in mutual abutment to preclude rotation in the second direction, and when the gear is in the second position, the second stops are in mutual abutment to preclude rotation in the second direction, as in claim 6, further having an injection-molded closure plate (13), and the housing includes a hollow portion (14) and the housing and plate have opposing walls shaped to abut a housing of the motor when the hollow portion and the plate are secured together, and the plate further includes protrusions which extend into the housing interior to abut sides of the motor housing to preclude movement therepast (column 7, lines 36-41), as in claim 7.

Erices further discloses the hollow portion includes an upstanding peripheral ridge (figure 1) unitarily molded therewith, and shaped to abut an inner surface of the plate, and the plate of the housing includes an upstanding peripheral ridge unitarily molded therewith and shaped to abut an inner surface of the housing, to protect against the egress of water into the interior of the housing, and wherein the ridges are located to provide a water flow path around the outer periphery thereof (column 3, lines 41-52), as in claim 8, and where the tubular mount of the

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housing has an open end (12') and the gear is rotatably mounted therein by means of a shaft (12) extending from the gear that is received in the open end, the gear including a rim spaced from the shaft, and the spring is located between the rim and the tubular mount of the housing, as in claim 9.

Erices additionally discloses the housing plate includes an aperture (figure 1) in communication with the central aperture of the gear, to permit passage of the camshaft therethrough, and wherein the distal end of the camshaft includes at least one resilient finger (end of shaft 12) received through the communicating apertures and having a surface in abutting contact with an opposing surface of the gear to preclude axial withdrawal of the camshaft from the wheel aperture (column 11, lines 30-32), as in claim 10, and where the cam surface for engaging a latch is oriented to move the latch in a direction having a vectorial component (figures 2 and 3) non-parallel to the direction of rotation of the gear shaft as the wheel rotates in the first direction, as in claim 11, further comprising electrically conductive contacts embedded into the housing as the housing is molded (column 7, lines 47-50), in electrical contact with the motor, and extending to the exterior of the housing for connection to an electric power supply, as in claim 12, as well as the housing and the closure plate having a plurality of holes (column 9, lines 41-43) in communication with each other and located to permit simultaneous fastening of the housing and closure plate together and fastening of the device adjacent the latch with the cam in operable proximity thereto, as in claim 13.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Erices, as applied above, in view of U.S. Patent Number 6,390,517 to Ehret.

Erices discloses the invention substantially as claimed. Erices discloses a latch release device having a housing (1, 11, 13, and 22), an electric motor (7) mounted in the housing, a worm (8) operatively coupled to the motor for driving rotation of the worm about an axis in a first rotational direction, a worm gear (gear on 12) in meshing engagement with the worm, and being mounted in the housing for rotation about an axis substantially orthogonal to the worm axis, a camshaft (12) mounted on the worm gear and having a rotation axis coincident with the gear axis, the camshaft having a distal end extending to the exterior of the housing, a cam (9) affixed at the exterior end of the camshaft, having a surface (figures 2 and 3) for engaging a latch (3 and 4) to move the latch from a closed position to a release position as the gear rotates in a first direction from a first position to a second position under control of the motor and where the work gear is biased against the rotation from the first position to the second position (column 3, lines 10-16). However, Erices does not disclose the biasing of the worm gear is provided by a spring. Ehret teaches of biasing a gear for a latch release device being provided by a helical spring (36) connected between a gear (34) and a housing (46) in the same field of endeavor for the purpose of rotating the gear in a direction against which the motor rotated the gear (column 1,

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lines 64-column 2, line 7). It would have been obvious to one with ordinary skill in the art at the time the invention was made to use a helical spring, located between the shaft and outer most edge of the gear, to bias the gear in order to rotate the gear in a direction opposite of what the motor rotated the gear, as in claims 3 and 14.

Erices also discloses the worm gear having a shaft (12) rotatably mounted to the housing, and an outer rim (figure 1) spaced from the shaft, the rim bearing teeth in the meshing engagement with the worm, as in claim 4, as well as the housing having an injection-molded plastic tubular mount (12') extending into the housing interior, with the gear being rotatably mounted thereon, as in claim 5, wherein the housing has a first stop and a second stop unitarily molded therewith, and the gear includes a first stop and a second stop (column 8, lines 30-37), wherein when the gear is in the first position, the first stops are in mutual abutment to preclude rotation in the second direction, and when the gear is in the second position, the second stops are in mutual abutment to preclude rotation in the second direction, as in claim 6, further having an injection-molded closure plate (13), and the housing includes a hollow portion (14) and the housing and plate have opposing walls shaped to abut a housing of the motor when the hollow portion and the plate are secured together, and the plate further includes protrusions which extend into the housing interior to abut sides of the motor housing to preclude movement therepast (column 7, lines 36-41), as in claim 7.

Erices further discloses the hollow portion includes an upstanding peripheral ridge (figure 1) unitarily molded therewith, and shaped to abut an inner surface of the plate, and the plate of the housing includes an upstanding peripheral ridge unitarily molded therewith and shaped to abut an inner surface of the housing, to protect against the egress of water into the interior of the

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housing, and wherein the ridges are located to provide a water flow path around the outer periphery thereof (column 3, lines 41-52), as in claim 8, and where the tubular mount of the housing has an open end (12') and the gear is rotatably mounted therein by means of a shaft (12) extending from the gear that is received in the open end, the gear including a rim spaced from the shaft, and the spring is located between the rim and the tubular mount of the housing, as in claim 9.

Erices additionally discloses the housing plate includes an aperture (figure 1) in communication with the central aperture of the gear, to permit passage of the camshaft therethrough, and wherein the distal end of the camshaft includes at least one resilient finger (end of shaft 12) received through the communicating apertures and having a surface in abutting contact with an opposing surface of the gear to preclude axial withdrawal of the camshaft from the wheel aperture (column 11, lines 30-32), as in claim 10, and where the cam surface for engaging a latch is oriented to move the latch in a direction having a vectorial component (figures 2 and 3) non-parallel to the direction of rotation of the gear shaft as the wheel rotates in the first direction, as in claim 11, further comprising electrically conductive contacts embedded into the housing as the housing is molded (column 7, lines 47-50), in electrical contact with the motor, and extending to the exterior of the housing for connection to an electric power supply, as in claim 12, as well as the housing and the closure plate having a plurality of holes (column 9, lines 41-43) in communication with each other and located to permit simultaneous fastening of the housing and closure plate together and fastening of the device adjacent the latch with the cam in operable proximity thereto, as in claim 13.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following patents are cited to further show the state of the art with respect to electrically controlled latch releasing devices:

U.S. Patent Number 6,773,042 to Spurr et al., U.S. Patent Number 6,719,333 to Rice et al., U.S. Patent Number 6,705,649 to Reddmann, U.S. Patent Number 6,641,184 to Erices et al., U.S. Patent Number 6,575,506 to Hayakawa et al., U.S. Patent Number 6,568,720 to Szablewski, U.S. Patent Number 6,076,868 to Roger, Jr. et al., U.S. Patent Number 6,048,002 to Ohta et al., U.S. Patent Number 5,951,070 to Spurr, U.S. Patent Number 5,909,918 to Kowalewski.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher Boswell whose telephone number is (703) 305-4067. The examiner can normally be reached on 8:30 - 5:00 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel P. Stodola can be reached on (703) 308-2686. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink that reads "Daniel P. Stodola". The signature is fluid and cursive, with the first name "Daniel" being more prominent than the last name "Stodola".

CJB *CB*
September 22, 2004

DANIEL P. STODOLA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600